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## NAS - Nonindigenous Aquatic Species

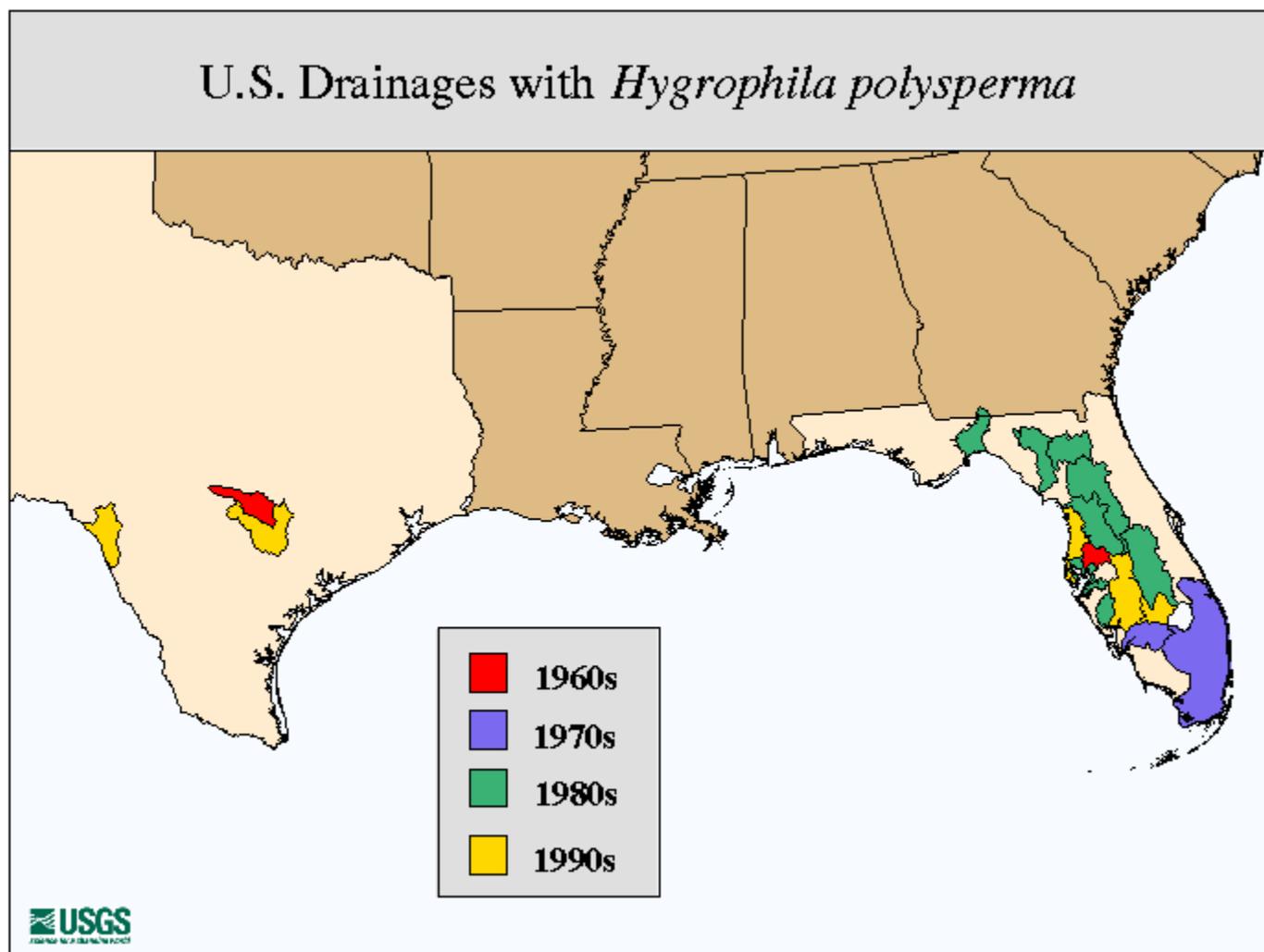
# *Hygrophila polysperma* (Roxb.) T. Anders.

**Common Name:** East Indian hygrophila, Indian swampweed, Miramar weed

**Taxonomy:** Division-Magnoliophyta (Angiosperms); Class-Magnoliopsida (Dicots); Subclass-Asteridae; Order-Scrophulariales; Family-Acanthaceae (Acanthus Family); Genus-Hygrophila

**Description:** Perennial rooted and rhizomatous aquatic herb; submersed to emergent, may become terrestrial in habit; having round to square stems bearing [opposite, elliptic, and sessile leaves](#); producing [flowers](#) at the leaf axil (Les and Wunderlin 1981; Angerstein and Lemke 1994).

**Native Range:** India and Malaysia (Angerstein and Lemke 1994) a geographic region referred to as the East Indies.



Map indicates recorded presence in at least one site within the drainage (USGS [Hydrologic Unit](#)

8), but does not necessarily imply occurrence throughout.

**Distribution - United States:** Well established in Florida and Texas since the 1960s.

### Florida

**1960's:** First recorded for Florida in 1965 along a roadside, north of Tampa (Les and Wunderlin 1981).

**1970's:** Next documented in 1979 from canals in two new drainages 1) Able Canal (Les and Wunderlin 1981), draining the Caloosahatchee River in western Florida and 2) Miramar and City of Margate Canals (V. Vandiver, Univ of Florida, pers. comm.), part of the Everglades drainage in eastern Florida.

**1980's:** During the 1980's occurrence in Florida increased nearly 10-fold as populations were found at 29 new sites. Included were well known infestations at the [Loxahatchee River](#), in 1986, and the Withlacoochee River in 1989. By 1989 the range of *Hygrophila polysperma* extended northward through central Florida to the Santa Fe River, Columbia County (FLDEP 1988-94). Also known was a disjunct westward location, along a roadside in Tallahassee, in the Florida Panhandle [*Katherine M. Gilbert s.n. (FLAS), 1988*].

**1990's:** By 1999 *Hygrophila polysperma* was known from at least [22 rivers/streams](#), 13 lakes, 2 ditches and 7 canal systems in Florida. This accounts for 20 counties and a total of 17 drainages in the state. More tolerant to the herbicides and grass carp used to control hydrilla, hygrophila is replacing hydrilla as the number one non-native aquatic weed in some southeast Florida canals (Duke et al. 2000).

**Texas** occurrence does not follow a pattern of rapidly expanding distribution, probably due to fewer and more widely dispersed water bodies in that region. Nonetheless, the magnitude of Texas infestations is severe, affecting several sensitive spring fed rivers and other disjunct sites.

**1960's:** Plants in the San Marcos River, Hays County, Texas were first collected in 1969 (Angerstein and Lemke 1994).

**1970's:** Additional localities within the San Marcos drainage were recorded in the 1970s, including Sessoms Creek, Hays County (Angerstein and Lemke 1994).

**1990's:** In 1994 plants were discovered in spring fed portions of the Comal River system, Comal County, and in 1998, at San Felipe Springs, located in a far western drainage of Val Verde County, Texas (D. Lemke, Southwest Texas State University, pers. comm.)

Reams (1953) mentioned that *Hygrophila polysperma* when "placed in lakes in the Richmond area quickly establishes itself" and in a personal communication to Schmitz (1985) elaborated that it was established in the Richmond, **Virginia** area lakes for 15-20 years, until extremely cold winter temperatures occurred in the 1970's. However, documentation as to whether the species has naturalized in Virginia is not available (Sutton 1995).

### References:

Angerstein, M.B. and D.E. Lemke. 1994. First records of the aquatic weed *Hygrophila polysperma* (Acanthaceae) from Texas. *Sida* 16(2):365-371.

Duke, D., P. O'Quinn and D.L. Sutton. 2000. Control of hygrophila and other aquatic weeds in the Old Plantation Water Control District. *Aquatics* 22(3):4-8.

(FLDEP) Florida Department of Environmental Protection, Bureau of Aquatic Plant Management. 1988-1994. Florida Aquatic Plant Surveys, electronic data. Bureau of Aquatic Plant Management, Florida Department of Environmental Protection, Tallahassee, FL.

Les, D.H. and R.P. Wunderlin. 1981. *Hygrophila polysperma* (Acanthaceae) in Florida. *Florida Scientist* 44(3): 189-192.

Reams, W.M. Jr. 1953. The occurrence and ontogeny of hydathodes in *Hygrophila polysperma* T. Anders. New Phyto. 52: 8-13.

Schmitz, D.C. 1985. *Hygrophila polysperma* - a review of the scientific literature. Florida Department of Environmental Protection, Tallahassee, Florida.

Sutton, D.L. 1995. Hygrophila is replacing hydrilla in South Florida. Aquatics 17(3): 4,6,8,10.

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